Amendments to the Specification:

Please replace the paragraph beginning on line 13 of page 6:

A length of flexible tubing 28 is fitted over open end 26 of second tubing 24 and extends to a first part 30 of a T-shaped hollow fitting 32 having another length of flexible tubing 34 connected to an air differential pressure transducer 36 at one inlet 38. Air differential pressure transducer 36 has another inlet 40 connected to another length of flexible tubing 42 joined to a static port tube that extends to receive static or ambient pressure 44 at a static port 46 in static port portion 47 adjacent to second tubing 24 of pitot-tube section 12. T-shaped hollow fitting 32 has a third part 48 connected to another length of flexible tubing 50 that is connected to a tube-like coupling 52 of a water differential pressure transducer 54.

Please replace the paragraph beginning on line 24 of page 6:

Rain gage section 14 has a vertical spray capture tube 56 closed at its lower end and orthogonally extending at its opposite end through a right angle transition into a horizontal portion ~~spray capture tube 58~~ to receive and collect water of spray 18. ~~Horizontal~~ The horizontal portion of spray capture tube ~~58~~ 56 of rain gage section 14 extends along side of and is parallel to second rigid tubing 20 of pitot-tube section 12. Water differential pressure

transducer 54 is mounted on ~~vertical~~ spray capture tube 56 and has a tube-like coupling inlet 60 extending into a reservoir 62 in ~~vertical~~ spray capture tube 56. ~~Horizontal~~ The horizontal portion of spray capture tube ~~58~~ 56 can have an inner radius of about 0.975 inches, for example, and has a coextensive opening 64 at its end that laterally extends across and faces the path of longitudinal flow of impacting air/water spray 18. Second length of rigid tubing 24 of pitot-tube section 12 can be connected to vertical spray capture tube 56 of rain gage section 14 to assure that opening 64 is positioned to be essentially next to and along side of orifice 22 and laterally extends across and faces the longitudinal path of incoming air/water spray 18 to receive and collect water ~~of~~ spray 18 through it.

Please replace the paragraph beginning on line 16 of page 7:

Air differential pressure transducer 36 could be a precision manometer and air pressure gage that are also manufactured by Dwyer Instruments Inc. and appropriately connected to pitot-tube section 12. Another commercially available manometer or differential pressure sensor for air differential pressure transducer 36 could be one of the PX-26 series of wet/wet differential pressure sensors manufactured by Omega Engineering Inc., One Omega Drive, Stamford, CT 06907-1660. Transducer 36 generates a signal (shown as arrow 66) that is representative of (or corresponds to) the velocity of spray 18 and is based on the pressure differential between the pressure of spray 18 at

orifice 22 of rigid tubing 20 and ambient or static pressure 44 at static port 46. The pressure of spray 18 at orifice ~~18~~ 22 is virtually the same as the pressure sensed at open end 26 of rigid tubing 24. Transducer 36 couples representative signal 66 to a computer-based control/readout module 68 having a general purpose computer 68A for further processing and/or visual indication of velocity of spray 18 on a visual readout 69, such as a monitor screen.

Please replace the paragraph beginning on line 7 of page 8:

Water differential pressure transducer 54 could be one of the PX-26 series of wet/wet differential pressure sensors manufactured by Omega Engineering Inc. Water differential pressure transducer 54 generates a signal (shown as arrow 70) that is representative of (or corresponds to) the amount or volume of water 16 in reservoir 62 in ~~vertical~~ spray capture tube 56. Signal 70 is based on the pressure differential between the pressure of water 16 at tube-like coupling ~~58~~ 60 of transducer 54 and the pressure of spray 18 at open end 26 of rigid tubing 24. Transducer 54 couples signal 70 to computer 68A of computer-based control/readout module 68 for further processing and/or a visual indication on readout 69 that shows the amount of water 16 captured during a predetermined period in capture tube ~~26~~ 56.

Please replace the paragraph beginning on line 3 of page 9:

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A second purge valve mechanism 78 can be mounted on a sump 80 at the bottom of second length of rigid tubing 24 to selectively purge any water of spray 18 that may have ~~been~~ accumulated in tubing ~~24~~ 28 and/or second tubing ~~26~~ 24 during a sampling period. Second purge valve mechanism 78 is connected to module 68 for actuation by a control signal (shown as arrow 82) to initiate purging into the ambient and can include a small pump 79 to speed up purging of sump 80. Control signal 82 can be produced periodically by module 68 to clear sump 80 after each or a number of sampling periods for determining velocities have elapsed, or to clear sump 80 at the beginning of a new sampling sequence.

Please replace the paragraph beginning on line 14 of page 9:

From the measurements of velocity in pitot-tube section 12 and of volume of water in rain gage section 14, system 10 of the invention can provide readings representative of dynamic loadings of the high speed craft such as an LCAC at different speeds in different ambient conditions. System 10 can be securely mounted on the exposed deck of an LCAC ~~of~~ where dynamic loadings attributed to fast moving air/water spray 18 are likely to be problematical, i.e., where the fast moving spray 18 would impact superstructure and equipment above deck level~~, for example~~. First rigid tube 20 of pitot-tube section 12 and ~~horizontal~~ the horizontal section of spray capture tube ~~58~~ 56 of rain gage section 14 are aligned with the direction of impacting air/water

spray 18 to respectively orient orifice 22 and opening 64 to laterally extend to face across the path or flow of impacting air/water spray 18.

Please replace the paragraph beginning on line 1 of page 10:

Pitot-tube section 12 allows transducer 36 to measure the differential air pressure between the dynamic pressure ~~23~~ at orifice 22 at open end 26 of second tube 24 and static, ambient pressure 44 at static port 46. Transducer 36 provides a signal 66 representative of the velocity V of the medium (impacting air/water spray 18) and connects this signal to module 68. An assumption will be made that the water component of air/water spray 18 is traveling at the same velocity as the air component. In time, water collected in pitot-tube section 12 may clog second rigid tubing 24 and/or flexible tubing 28, but this possibility will be evident from the readings at module 68; however, before this happens, the interconnected sump 80 can be drained via an appropriate control signal 82 to second pump valve mechanism 78. The velocity V of impacting air/water spray 18 can be determined for each second or periodically as often as desired and averaged if desired in computer-based control/readout module 68.

Please replace the paragraph beginning on line 16 of page 10:

When the velocity V of impacting air/water spray 18 is determined, rain gage section 14 can help provide other information needed to determine the amount of the dynamic impacting force attributed to air/water spray 18. The dynamic force experienced by an object in the flow field is:

$$F = 1/2\rho V^{2}.$$

However, the density ρ in the equation is the density of the medium of air/water spray 18 which the above-deck structure and equipment of the LCAC is exposed to. The densities of the constituents are: ρ_{air} = 0.002377 slugs/ft^3, $\rho_{sea\ water}$ = 2 slugs/ft^3, and $\rho_{fresh\ water}$ = 1.94 slugs/ft^3.

The dynamic force experienced would be:

$$F = 1/2\rho V^2 = 1/2\ (\%_{water}{*}\rho_{water} + \%_{air}{*}\rho_{air})V^2,$$

where ρ_{water} = the density of sea water (2 slugs/ft^3) and ρ_{air} = the density of air (0.002377 slugs/ft^3) in a salt water environment.

Please replace the paragraph beginning on line 5 of page 11:

Determination of the relative percentages can be provided in computer-based control/readout 68 coupled to receive signals 70 representative of the volume of water 16 that has accumulated in rain gage section 14. Since opening 64 of ~~horizontal~~ spray capture tube ~~58~~ 56 can have a known diameter of about 0.975 inches, for example, the area~~, πr^2,~~ of opening 64 ~~is~~ $= \pi r^2$ $= \pi(0.975)^2$ = 2.9865 in^2. So, if the velocity of the flow is V and is known, the data representative of

successive accumulated amounts of water 16 of air/water spray 18 in reservoir 62 can be recorded every second. Accordingly ~~therefore~~, for each second, rain gage section 14 will have "captured" a volume of water spray V_{WS}:

$$V_{WS} = V(\text{in inches/sec})*1 \text{ sec} * 2.9865\text{in}^2 = 2.9865V \text{ in}^3.$$

During each second that V_{WS} is captured, water differential pressure gage 54 at the bottom of vertical spray capture tube 56 would have seen or indicated (via representative signals 70) a change $\underline{\Delta}$ in the height h of water 16 inside of vertical spray capture tube 56. The quantity $\underline{\Delta}$h would have been indicated as a change $\underline{\Delta}$ of pressure P,($\underline{\Delta}$P) from water differential pressure gage 54. The "capturing intervals" can vary from the exemplary one second to other durations as needed for determinations of acceptable reliability of relative air/water determinations for air/water spray 18.

Please replace the paragraph beginning on line 4 of page 12:

The percentage of water in the flow would then be:

$$\%_{water} = V_{WC}/V_{WS}\text{ , or}$$

$$\%_{water} = 1.9906\ \underline{\Delta}h\text{ in}^3/\ 2.9865\text{ V in}^3$$

where $\underline{\Delta}$h is provided by water differential pressure transducer 54 at the bottom of vertical spray capture tube 56 of rain gage section 14, and V (velocity of air/water spray 18) is provided by the air differential pressure transducer 36 connected to second rigid tubing ~~26~~ <u>34</u> of pitot-tube section 12.

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Please replace the paragraph beginning on line 15 of page 12

Therefore, the dynamic force $F_{dynamic}$ across the area of opening 64 ~~of horizontal tube 58~~ of rain gage section 14 would be given by:

$$F_{dynamic} = 1/2\underline{\rho}V^2 = 1/2\ (\%_{water}*\underline{\rho}_{water} + \%_{air}*\underline{\rho}_{air})V^2,$$

and inserting the values for $\underline{\rho}$ gives:

$$F_{dynamic} = 1/2\ (\%_{water}*2slugs/ft^3 + \%_{air}*0.002377\ slugs/ft^3)V^2.$$

Filling in the values for the two percentages will provide complete information for solution of the equation for the area of opening 64. Next, by simply multiplying the value obtained for $F_{dynamic}$ times the total area of the LCAC that is exposed above-deck to impacting air/water spray 18 (including superstructure and on deck equipment), a realistic value for the total dynamic loading for the LCAC can be arrived at.